

REMARKS

No new matter is added by this amendment. The present application is a continuation application of U.S. Patent Application Serial No. 09/654,458 filed September 1, 2000. In a prior amendment claims 1-15 were cancelled and new claims 16-38 were added. In a second prior amendment, claims 16 and 33 were amended, claim 20 was cancelled, and new claim 39 was added. By this amendment, claims 16-19, 21-23, 25-30 have been cancelled, and claims 24, 31, 32, and 34 have been amended. The claims remaining in consideration are claims 24, 31-36, and 39. Reconsideration is respectfully requested.

In the Advisory Action dated August 16, 2006, the Examiner confirmed applicant's assumption that he previously intended to indicate that claim 30 contained allowable subject matter and that dependent claim 30 would be allowed if presented in independent form.

This is noted with appreciated.

Independent claim 24 has been amended to include the limitations of dependent claim 30 and any intervening claims. The remaining claims 31, 32, 33, 34, 35, 36 and 39, are ultimately dependent upon allowable claim 24. Therefore, applicants respectfully assert that claims 31-36 and 39 are also allowable.

The Examiner objected to previously submitted proposed Figures 4 and 5 for containing new matter. This objection is respectfully traversed. While applicants respectfully assert that the specification, including the claims (as originally filed), fully support previously proposed Figures 4 and 5, applicants submit revised proposed Figures 4 and 5, simply in order to advance the present application to issue.

New Figure 4 shows a nozzle body 10 which includes a coating 14a of higher thermal conductivity as in Figure 3. The portion of the nozzle body 10 which is uncoated in Figure 3 is coated with a material 14b which has a lower thermal conductivity than the thermal conductivity of the nozzle body 10. This is fully taught in the paragraph beginning on page 9, line 8 which has been amended (above) to reference new Figure 4.

New Figure 5 shows a nozzle body 10 which has a first coating 14'a similar to the coating shown in Figure 1 or 3. The first coating 14a has a lower thermal conductivity than the thermal conductivity of nozzle body 10. A further coating 14d is applied to the first coating 14'a. The further coating 14d has a higher thermal conductivity than the thermal conductivity of the nozzle body. This is fully taught and supported by the paragraph beginning on Page 9, line 22 which has been amended to include references to new Figure 5.

The proposed drawings were objected to because they included reference numbers not mentioned in the description. The specification has been amended to include the missing reference numbers. Therefore, applicants respectfully request that the second drawing objection be withdrawn.

The drawings were objected to because they do not include the multi-layer structure recited in claim 24 or the additional substrate of material recited in claim 36. Applicants believe that they have overcome the Examiner's objections with respect to the revised proposed new Figures 4 and 5. New Figures 4 and 5 clearly show these element and structure and are fully supported by the disclosure (including the claims). Therefore, applicants respectfully request that the object to the drawings be withdrawn.

A previous draft of the proposed drawing corrections were faxed to Examiner Kim on September 1, 2006 and an Examiner Interview was held on September 13, 2006. Examiner Kim expressed concerns that the proposed drawing corrections of September 1, 2006 were not supported by the specification. The newly proposed drawings are aimed specifically at the Examiner's concerns and exactly mirror the language in the specification.

With regard to Figure 4, the Examiner expressed concern that the bonding layer 14^e was not between the nozzle and layer 14^b. In newly proposed Figure 4, the bonding layer 14^e, is between the nozzle and both layers 14^a and 14^b. This is fully supported by the specification. Specifically, in the paragraph beginning on page 10, line 15, which reads in part (as amended above to include reference numbers): "an additional substrate material 14^e may be applied to the nozzle body 10 to which a coating 14, 14^a, 14^b is to be applied to ensure satisfactory bonding of the coating(s) to the nozzle body".

With regard to Figure 5, the Examiner expressed concern that the further coating 14^d was not along the entire outer surface of the first coating 14'^a. In the newly proposed Figure 5, the further coating 14^d is shown along the entire outer surface of the first coating 14'^a. This is fully supported by the specification, specifically, in the paragraph beginning on page 9, line 22, which reads in part "a further coating 14^d having a higher thermal conductivity than the thermal conductivity of the nozzle body 10 is applied to the first coating 14'^a".

In a second advisory action dated September 28, 2006 made the following notes (numbering added):

(1) The amendment to the specification recites "14'a" which is not shown in the Figures. (2) Additionally, the amendment to the drawings and the specification is not responsive to the drawing objection of the final Office action mailed on July 6, 2006. Amended claim 24 recites that the

first coating of the multi-layer coating has a higher thermal conductivity than the nozzle body. The amendment specification and the drawings propose to show the first coating having a lower thermal conductivity than the nozzle body. (3) Finally, the amended claims contain withdrawn claims 27-29 which define embodiments contradictory to parent claim 24. Applicant's election was made with traverse in the reply filed on May 20, 2005.

With respect to note (1), a new formal drawing sheet with Figures 4 and 5 is attached herewith with the missing reference number (in Figure 5).

With respect to note (3), claims 27-29 have been cancelled.

With respect to note (2), applicant's attorney contacted Examiner Kim on October 31, 2006 to seek clarification. The Examiner confirmed that respect to the Examiner's objection to the drawings in final office action, *only the objection stated in the above cited note remain – all other objections having been withdrawn.* This is noted with appreciation.

The examiner states: "Amended claim 24 recites that the first coating of the multi-layer coating has a higher thermal conductivity than the nozzle body."

This is true.

The examiner further states: "The amendment specification and the drawings propose to show the first coating having a lower thermal conductivity than the nozzle body."

While this is also true, the specification, in describing Figure 5, also states that the first and second coatings may be reversed.

Specifically, the paragraph on page 9, beginning on line 22 states in part:

Alternatively, the order in which the coatings are layered may be reversed such that a first coating having a relatively high thermal conductivity is applied to the nozzle body 10 and an additional coating having a relatively low thermal conductivity is applied to the first coating. Typically, the additional coating may be formed from a material having properties similar to the coating 14, as described previously with reference to Figure 1. This alternative embodiment is

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particularly advantageous if the additional coating (i.e. the outermost layer) having a relatively low thermal conductivity is only applied to a lower region of the nozzle body 10, preferably only that region which projects from the cylinder head 20 and is exposed to temperatures within the combustion space.

This paragraph is specifically discussing the embodiment shown in Figure 5. Thus, Figure 5, which shows a two layer embodiment supports, both arrangements discussed in the above referenced paragraph, including the embodiment claimed in allowed claim 24. Therefore, applicant's respectfully assert that all of the elements of allowed claim 24 are shown in the drawings and request that the objection be withdrawn.

All of the Examiner's objections and rejection having been successfully overcome or made moot, applicants respectfully assert that the present application is now in condition for allowance. An early notice of allowance is solicited.

Applicant believes that no fees are due, however, if any become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789 in the name of Howard & Howard Attorneys.

Respectfully submitted,

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